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THE HISTORY AND STATUS OF PSYCHOLOGY IN THE UNITED STATES

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Since the birth of psychology in America, two attempts have been made to outline the period of its development and to take census at the particular stage of growth reached at the time. In 1891 W. O. Krohn¹ published an account of the work done at seventeen American colleges and universities, a description of the laboratories and the apparatus in use, a note on the development of the departments, and, in some cases, an evaluation of the equipment, including books, instruments, and scholarship and fellowship funds. A few sentences from his introductory paragraph illustrate the condition of psychology at that time. Speaking of the Leipzig laboratory, founded in 1879, he says:

The value of their new experimental method so impressed these students that it was soon carried into effect in other institutions, and happily this new movement early found its way to America. To President G. Stanley Hall and Dr. J. McK. Cattell, Wundt's first American students, belongs the credit of introducing the experimental methods of treating psychology into the American college; the first laboratory being that of Johns Hopkins University at Baltimore, in which laboratory so many of the teachers of experimental and comparative psychology in the various colleges of the United States received their training. From this one comparatively small laboratory at Johns Hopkins the number has rapidly increased to fifteen now in actual use while no less than ten other institutions have taken steps to secure laboratory facilities within a year.

A few years after this account was written, E. B. Delabarre² published statistics with reference to the status of psychology in twenty-seven colleges and universities in America. In addition to historical data concerning the foundation of the laboratory, number of professors and students, and general laboratory equipment, he tabulated the evaluation

¹ W. O. Krohn: Facilities in Experimental Psychology in the colleges of the U. S., *Report of U. S. Commissioner of Education*, 1890-1891, 1139-1151.

² E. B. Delabarre: Les laboratoires de psychologie en Amérique, *L'Année psychologique*, I, 1894, 209-255.

of apparatus, amount of scholarship funds available, number and kind of courses offered, and type of research work pursued. Of the twenty-seven laboratories thus described, eight or nine were devoted exclusively to instruction and demonstration, five to eight were engaged in special research, and about ten were used for both instruction and research. In conclusion he says:

Ce compte rendu correspond à l'état de la psychologie en Amérique vers la fin de 1894. Mais l'intérêt de notre pays pour les études psychologiques est si développé et si profond que le compte rendu de l'heure présente ne sera plus vrai demain. Le nombre des laboratoires continue à augmenter rapidement. . . . Les laboratoires existant augmentent rapidement leurs ressources, et quelques-uns qui n'ont encore qu'une importance secondaire peuvent d'un moment à l'autre recevoir de nouveaux crédits et passer au premier rang. Notre description s'applique par conséquent à un système qui est en voie d'évolution progressive, et qu'on doit juger surtout à ce point de vue.

The progress which Delabarre described in this article has continued almost steadily until the present time, when any large university in the country would consider its plant insufficient in equipment without a psychological laboratory of some sort. There is, however, to the best of the author's knowledge, no statistical inquiry of an adequate kind available, by means of which those interested in the matter can reckon up, as it were, the assets and liabilities in the account to date of our still youthful discipline. It would, in short, be a convenience to those who are watching the progress of the science, to have a brief, yet adequate, description of its attainments after over twenty-five years of growth.

In March, 1911, Titchener sent out a questionnaire for the purpose of obtaining material for an article on the historical development and present status of psychology in the larger colleges and universities of the country. Thirty-nine replies were received. When an attempt to systematise the results was made, it was soon discovered that in consideration of the promise of, and frequently because of the request for, privacy the significant facts concerning present conditions could not be published. These facts related, for the most part, to the status of psychology in regard to other departments; in particular, the relation of psychology to philosophy was subject to frequent criticism. It happened that at about the same time the writer was independently engaged in gathering material from the catalogues of a large number of academic institutions in the attempt to correlate the results for publication.

Opportunely, at the suggestion of Titchener,³ we combined forces and material under a single heading. This work furnished the substance of a previous paper⁴ which, enlarged and elaborated by means of a statistical inquiry conducted by the writer, gave rise, in turn, to the present article.

The questionnaire sought answers to the following:

- (1) When was the psychological laboratory established?
 - (2) Who was placed in charge? With what academic title?
 - (3) Was the introductory course in psychology (general psychology, elementary psychology) assigned, at the above date, to the experimental psychologist? If not, what department had charge of it?
 - (4) Was this course independent, or was it offered in connection with (or in dependence upon) other specified courses?
 - (5) What, in these two respects, is the present status of the introductory course?
 - (6) With the establishment of the laboratory, was the department of psychology recognised as independent, or was it subordinated to some other department or division? In the latter event, what was its precise relation to the superior department?
 - (7) What, in this respect, is the present status of the department?
- (The replies to the two remaining questions were regarded as confidential.)
- (8) Are there any important events in the history of the department (dismissals, readjustments, etc.) that illustrate or supplement your replies to the preceding questions?
 - (9) What is your judgment of the present status of the department of psychology in your University?

The answers to these questions are condensed into the accompanying tabular arrangement. With that abbreviation goes some necessary injustice, because parenthetical qualifications and modifications are omitted in the last four columns. Official departmental relations are variously interpreted because of local considerations; where departments are technically separated and independent, the combination of courses in a group-system with those of other departments tends to bind the departments together in such manner that the link is often stronger than in cases of complete dependence. The writer was obliged, therefore, in a few instances, to make very 'close' decisions. On the whole, however, no great wrong was done. The essential facts of the table can be approximately summarised into the following:

Laboratories first began to appear in definite form late in the 'eighties.' Up to and including 1890, 8 such laboratories had been started, and 5 of these were at western state insti-

³ For the material gathered from the questionnaire and for timely suggestions, I wish to express my indebtedness to Professor Titchener.

⁴ Read before the meeting of the Association of Experimental Psychologists at Clark University, April 16, 1912.

TABLE I. SYNOPSIS OF STATISTICS FROM HISTORICAL QUESTIONARY

(1) LAB. ESTAB'D?	(2) IN CHARGE?	(3) IN CHARGE INTRO. PSYCH?	(4) IND'T THEN?	(5) IND'T NOW?	(6) DEPT. IND'T THEN?	(7) DEPT. IND'T NOW?
1 Harvard	James	I anat & physio	Yes	Yes	No-ph	No-ph
2 J Hopkins	Hall	p p & ped	No-ph	No-ph	Yes	Yes-ph & ed
3 Indiana	Bryan	H ph	No-ph	Yes	No-ph	No-ph
4 Wisconsin	Lastraw	P exp & comp p	Yes	Yes..ed	No-ph	No-ph
5 Clark Univ.	Wolfe	I p	Yes	Yes	Yes	Yes
6 Nebraska	Tufts	P ph	Yes	Yes	No-ph	No-ph
7 Michigan	Patrick	I ph	No-ph	Yes	No-ph	No-ph
8 Iowa	Castell	P exp p	No-ph	Yes	Yes-ph	Yes-ph
9 Columbia	F. Angell	AP p	No-ph	Yes	Yes	Yes
10 Cornell	Calkins	I p	No-ph	Yes	No-ph	Yes-ph
11 Wellesley	Delabarre	AP p	Yes	Yes	No-ph	Yes-ph
12 Brown	Krohn	P p	Yes	Yes	No-ph	No-ph
13 Illinois	Templin	AP ph	Yes	Yes	Yes	Yes
14 Kansas	Strong	AP p	Yes	Yes	No-ph	No-ph
15 Chicago	Baldwin	P exp p	No-ph	No-ph	No-ph	No-ph
16 Princeton	Scripture	I exp p	No-ph	Yes	No-ph	No-ph
17 Yale	J. Angell	I ph	No-ph	Yes	No-ph	No-ph
18 Minnesota	Shaw	As p	Yes	Yes	Yes-ph	Yes-ph
19 Wesleyan	Smith	I p	No-ph	No-ph	Yes	Yes
20 North	Stratton	As ph & ped	No-ph	No-ph	Yes-ph	Yes
21 Ohio State	Wissler	AP p & ed	No-ph	No-ph	No-ph	No-ph
22 Bryn Mawr	Leuba	I ph	Yes	Yes	Yes-ph	Yes-ph
23 Texas	Meyer	P exp p	Yes	Yes	Yes	Yes
24 Missouri	Scott	I p & ped	Yes	Yes	Yes	Yes
25 Northwestern	Downey	I eng	Yes	Yes	No-ph	No-ph
26 Washington	Colgrove	P ph	Yes	Yes..ed	No-ph	No-ph
27 Washington	Libby	H ph	Yes	Yes	Yes	Yes
28 Colorado	Judd	P p	Yes	Yes..ed	Yes	Yes
29 Cincinnati	Thompson	I ph	Yes	Yes	Yes	Yes
30 Mt. Holyoke	Breese	P p & eth	Yes	Yes	No-ph	Yes-ph
31 Tennessee	Washburn	AP ph	Yes, ...ed	Yes	Yes	Yes
32 Vassar	Burnett	I p	Yes	Yes	No-ph	No-ph
33 Bowdoin	Book	I p	Yes	Yes	No-ph	Yes
34 Montana	Scott	P p	Yes	Yes	No-ph	Yes-ph
35 Tufts	Bingham	P p & ed	Yes	Yes	Yes-ph	Yes-ph
36 Dartmouth	Gifford	AP p & ed	No-ph & ed	No-ph	Yes-ph	Yes-ph
37 Vermont	—	—	No-ph	No-ph & ed	No-ph	No-ph & ed
38 Amherst	—	—	No-ph	No-ph	No-ph	No-ph
39 Amherst	—	—	No-ph	No-ph	No-ph	No-ph

SYMBOLS USED

AP	Assistant or Associate	exp	Experimental	ph	Philosophy	<i>italics</i>	emphasise
As	Professor	I	Instructor	ped	Pedagogy		psychology as an inde-
anat	Assistant	ind't	Independent	physio	Physiology		pendent discipline. Ital-
comp	Anatomy	intro	Introductory	—	—		icised names indicate
ed	Comparative	H	Head of Department	—	(after 'no')		official rank as psychol-
eng	Education	P	Professor	co-ordinate with		ogists.
eth	English	p	Psychology	tendency toward		
	Ethics			with			

tutions. For three years thereafter three laboratories were founded per year. Then the pace kept on by ones and twos, with threes in 1900 and 1901, until a halt was called in 1904. A few more have come since then. The two most prolific periods seem to be about 1890 and 1893. It is interesting to note that with the appointment of Scripture at Yale in 1893 used as a node to divide the series, the percentage of total appointments assigned to men with academic rank in psychology (as indicated by italics) is approximately the same for each period, although the division favors the first period on account of its temporal brevity. Altogether 22 out of 36 (61 *per cent.*) held such title at the time of appointment. More recently, also, the introductory courses have gone to psychologists and have received greater independent recognition, especially since 1898. This result is not wholly unexpected, because seven of the courses in introductory psychology, though not originally independent, have now become self-sustaining. Eight courses, however, are still, in one way or another, dependent on some other department, usually on that of philosophy. Eight departments of psychology have been created out of former alliances with philosophy, but eighteen institutions still have affiliations of psychology to philosophy.

Reading horizontally across the table, we find the following conditions to hold: 7 out of the 39 institutions, viz., Clark, Illinois, Missouri, Cincinnati, Tennessee, Tufts, and Dartmouth, have had psychologists in charge and have had their department and courses independent from the beginning of things; 9 more, viz., Harvard, Wisconsin, Nebraska, Brown, Kansas, Texas, Wyoming, Washington, and Vassar, have always had their introductory courses independent, but have departmental affiliations to some other discipline, usually philosophy; to this list 7 institutions, viz., Wellesley, Chicago, California, Northwestern, Mt. Holyoke, Bowdoin, and Montana, may be added as institutions which hold to these conditions (*i. e.*, introductory courses were always independent, and departments have been dependent) with the exception that their departments are now independent; 2 institutions, viz., Iowa and Columbia, have had their introductory courses dependent, but now have those courses, and always have had their departments, independent; 2 more, viz., Cornell and Ohio State, have had both department and introductory courses dependent, but have relieved themselves of that condition now. Many more comparisons could be drawn.

Statements made in answer to the last two questions were promised confidential treatment, and will therefore be pre-

sented without reference to source. Local identification and definite orientation would, indeed, contribute to the adequate interpretation and significance of the remarks made, but the limitation imposed is, of course, a necessary one. For that reason, pertinent generalisations must be our only resource.

The replies seem to group themselves roughly into two large categories: (1) those coming from departments of psychology that are independent, and (2) those coming from departments affiliated to other departments, or combined with another discipline into a single larger department. The second group subdivides into three sections: (*a*) conditions are reported as favorable and satisfactory, (*b*) conditions are reported as unfavorable, owing to demands made upon psychology by education, and (*c*) conditions are reported as unfavorable because of affiliations to philosophy.

In the institutions where psychology is absolutely independent, there seems to be, in general, no cause for complaint. Full recognition has not only been gained, but also, in almost all cases, rapid progress is being made in the way of increasing registration of students, academic work accomplished, and the establishment of prestige in the institution. If a general impression is allowed, it would not be far amiss to state that the replies from such departments are enthusiastic and hopeful. In one or two instances, especially from state-controlled institutions of the west, a note of regret was heard in regard to the demands that the department of education, usually a state board, was making at the hands of the psychologist. In such cases, a direct attack, in contrast to insidious attacks made elsewhere when numerous applied problems are brought to the theoretical psychologist for solution, is hardly unexpected, and gives a good example of the practical tendencies of many of our state universities. The pressure, however, is not very frequent or very heavy, and can be met in time by the appointment of an educational psychologist whose point of view is that of application. Wherever psychology is affiliated to other departments, in most cases to philosophy, more infrequently to education, we have a twofold possibility of conditions: either (1) the situation is agreeable and satisfactory, or (2) complaint is made. In about one half of the institutions where psychology is affiliated to philosophy, conditions are reported as favorable to the younger discipline. It must be noted that there are many degrees of affiliation, and that most of the favorable reports come from institutions where the affiliation is partial and for the most part theoretical. In some universities, the philosopher was on the ground first,

and is technically the head of the combined department of philosophy and psychology, but he receives a salary equal to that of the psychologist, sometimes has less 'academic prominence,' and frequently allows the psychologist to go to the president, or board of trustees, directly, for administrative consultation. In such instances there seems to be good personal relationship and friendship in the combined department. In the remaining situations, where this favorable condition does not exist, the reasons for complaint are various. The most frequent complaint is to the effect that wherever students in psychology are also required to elect philosophy they fall into a 'philosophising tendency' which works havoc with the empirical approach attempted by modern psychology. Here seems to lie the main point at issue. In spite of repeated efforts to the contrary,⁵ it must be conceded by the philosophers that the method of approach of their discipline and sub-disciplines is not of the same empirical nature as is that of the psychological laboratory. Furthermore, in most instances of satisfactory condition between psychology and philosophy, it is found that the type of psychology taught, as outlined in the catalogues of the institutions concerned, is the philosophical, non-empirical, generalising variety current before 1880. It is not the purpose of this paper to discuss at length the question of the nature of experimental psychology as compared with that of the philosophical disciplines, but to record the opinions of those who answered the questionnaire. A number of these replies indicate, in no uncertain terms, that affiliation to philosophy is unfortunate;⁶ that, if affiliation becomes necessary on the score of administrative economy, occupancy of the same building, and elective group systems, in at least three instances, academic relationship with the biological sciences is preferred; and that the 'scientific approach' of experimental psychology is responsible for the steady progress of the discipline. There are other handicaps imposed upon psychology in institutions where the science is not independent. Sometimes philosophical courses are made compulsory, while psychological courses are entirely elective; often psychological courses can be elected only in conjunction with philosophical courses; frequently an old-fashioned pedagogical department demands a primitive type of educational

⁵ For a detailed discussion of the subject see E. Albee: Descriptive and Normative Sciences, *Philosophical Review*, xvi, 1907, 40; J. Boodin: *Truth and Reality*, 1911, 288; G. Sabine: Descriptive and Normative Sciences, *Philosophical Review*, xxi, 1912, 433.

⁶ As early as 1891, H. Münsterberg advised a separation of psychology and philosophy: *Aufgabe und Methoden der Psychologie*, 1891, 270.

psychology. In two institutions the department of psychology seems to be doomed to elimination for financial and personal reasons. In general, however, the progress of psychology is assured. In several institutions an independent department of psychology is about to be, or has been at this time, about a year after the expectation was expressed, established. The total impression gotten from a perusal of the comments contained in the replies is one of patient endurance not uncolored with the hope for better things to come.

The second part of the investigation was made with a view to compare, if possible, the standing of psychology as an academic discipline with that of several other disciplines. In the search for a discipline of approximately the same age as psychology, we discovered that political economy, established as an academic discipline about 1885, at the time of the meeting of the American Economic Association, would meet the requirements. Education and physiology were next suggested, because of their intimate historical connection with psychology, contributing, respectively, educational and physiological psychology. Physics was next considered because of its well-established recognition as an empirical science, and because of its traditional relations with the mental sciences in the field of knowledge,⁷ and then philosophy because it, without doubt, is the parent of psychology in this country. As the work of gathering material from the 1910-11 catalogues of the 39 institutions was proceeding, it became evident that physiology did not lend itself to treatment, because its academic demarcation from such subjects as anatomy, medicine, morphology, histology, and biology was far from rigid. Complications also arose in connection with the medical schools of universities. Zoölogy was therefore substituted for physiology. The material gathered consisted of the number of professors, assistant or associate professors, instructors, and assistants, together with the number of subject hours per week per year for each of the six disciplines named, in each of the 39 institutions. Whenever an officer is connected with more than one department, an equal portion of his time, and, consequently, also his statistical value, is assigned to each department; *e. g.*, a professor of philosophy and psychology obtains one-half credit under philosophy and one-half under psychology. The distribution of officers among the disciplines is, then, as follows: physics, 265 (66 professors, 62

⁷This may be expressed by the Cartesian formula: *World = Mind + Matter*, or by the Herbartian equation: *World of knowledge = Mental Sciences + Natural Sciences*.

assistant professors, 64 instructors, 73 assistants); zoölogy, 175.5 (51 professors, 45.5 assistant professors, 39 instructors, 40 assistants); political economy, 175 (62.5 professors, 46 assistant professors, 41 instructors, 25.5 assistants); philosophy, 123.5 (73 professors, 20.5 assistant professors, 15 instructors, 15 assistants); education, 102 (50 professors, 27.5 assistant professors, 13.5 instructors, 11 assistants); and psychology, 88.5 (32.5 professors, 19 assistant professors, 19 instructors, 18 assistants). The total number of academic hours ('university hours' per year) offered by each discipline is: political economy 3009, physics 2740, zoölogy 1944, philosophy 1671, education 1392, psychology 1190.

It was then considered desirable to correlate the number of university officers with the number of hours offered in each of the six disciplines in every one of the 39 institutions. In order to do this, and in the absence of any other recognised method of procedure, the academic rank of instruction was weighted by a factor proportionate to the relative average salary for that rank in America.⁸ These factors were 2.5 for professorships, 1.75 for assistant professorships, 1. for instructorships, and .5 for assistantships; i. e., the total number of hours offered at a given institution in a given subject was multiplied by 2.5 for every professor in that subject, by 1.75 for every assistant professor, and so on. The product, because the instructor factor is unity, is termed the 'instructor hour.' Academic titles of officers determine the tabulation under the department: the fact that, e. g., an instructor in psychology gives courses in education does not classify him under 'education,' but the fact that he has academic rank and title 'in psychology' gives him the qualification of classification under 'psychology.' Associate professors, or associates, or preceptors (at Princeton) are classified under 'assistant professor.' Hour units are for one academic year exclusive of summer sessions, and courses in the summer session are not counted. Additional sections in a single course are counted as additional semesters with the corresponding number of hours. Educational psychology is credited under psychology. When courses in education are given in a separate school of education, only those courses are counted which bear on the theory, philosophy, and principles of education. Practical and technical courses are

⁸ The Carnegie Foundation for the Advancement of Teaching: *The Financial Status of the Professor in America and in Germany*, Bulletin 2, May, 1908, 21, 30, 31, is responsible for the following average salaries: professor \$2500, associate professor \$1900, assistant professor \$1600 (average of the two \$1750), instructor \$1000, and assistant \$500.

TABLE II. RELATIVE RANK IN TERMS OF
' INSTRUCTOR-HOURS '

	Psy- chology	Educa- tion	Zoöl- ogy	Pol. Econ.	Phys- ics	Philoso- phy
Columbia†.....	1730	1370	1655	1060	4180	3561
Chicago.....	420	885	756	1127	924	500
Minnesota.....	131	525	1180	602	602	134
Cornell†.....	232	157	214	1650	4560	1020
Wisconsin†.....	150	530	572	3220	2140	475
Michigan.....	105	376	701	859	2640	728
Illinois†.....	258	502	1230	1658	1463	205
Northwestern.....	119	140	310	427	162	119
Nebraska†.....	28	510	860	615	1065	585
Harvard†.....	279	270	920	1425	1362	1362
California†.....	158	501	731	420	1230	644
Ohio State.....	280	392	1104	926	1662	420
Yale.....	375	48	1120	1542	2920	1090
Missouri.....	442	98	252	374	493	185
Texas.....	20	1200	292	212	605	170
Kansas†.....	132	803	899	220	693	246
Indiana.....	117	608	378	351	434	188
Washington†.....	59	497	542	875	426	138
Iowa.....	130	545	1118	1035	882	155
Tennessee.....	20	57	54	15	20	22
Princeton.....	72	—	30	667	1733	568
Smith†.....	108	69	210	72	256	217
Cincinnati†.....	81	98	120	42	575	63
Colorado.....	94	262	75	83	184	93
Dartmouth†.....	37	9	114	360	287	45
Wellesley†.....	167	45	314	280	203	127
Tufts.....	6	3	190	126	115	210
Vassar†.....	48	3	45	112	298	90
Brown.....	80	132	96	213	360	384
J. Hopkins.....	111	5	298	136	781	159
Mt. Holyoke†.....	96	45	150	21	290	77
Vermont†.....	8	60	46	166	98	25
Amherst†.....	13	6	60	102	126	32
Bryn Mawr.....	90	12	81	136	170	273
Bowdoin†.....	45	—	58	26	40	30
Wesleyan†.....	38	—	35	27	253	50
Wyoming.....	26	75	22	101	150	20
Montana.....	41	37	61	24	75	17
Clark Univ.....	126	25	50	14	120	8

† Marks institutions represented in the last three tables.

excluded. Political economy or economics is differentiated from political science and sociology. The latter courses are excluded. The results of this correlation appear in Table II. In this and the following tables, institutions are placed in the

order⁹ of total registration of students in the institution, highest registration leading. Of the 39 institutions tabulated, 19 appear in the two following tables (indicated by obelisk). Since a cross comparison will later be made between the three tables, it was deemed necessary to calculate averages for only these 19 institutions. The average number of 'instructor hours,' therefore, is: physics 1029, political economy 650, philosophy 473, zoölogy 451, education 288, and psychology 193. Expressed in *per cent.*, the disciplines rank, according to this comparison: physics .334, political economy .211, philosophy .152, zoölogy .146, education .094, and psychology .063.

By means of correspondence it was possible to procure the number of student registrations for each of the disciplines in a large number of these 39 institutions. It was not possible to establish a uniform method of counting these registrations, because some of the figures given represent registrations, others eliminate double or triple registrations, *i. e.*, cases where the same students are registered in more than one course at a time, and thus represent separate students. No great error, however, results. Most of the figures given are actual registrations and not estimates. Registrations for both semesters are added, giving registration for the year, 1910-11. To obtain averages for the six disciplines compared in the 19 institutions, it was necessary, in a few instances, to divide the registration given for combined departments, arbitrarily, into equal shares under the heading of the disciplines that were thus combined. The average registrations thus derived are: political economy 636, physics 568, philosophy 298, education 292, psychology 244, zoölogy 187. Arranged in *per cent.* of distribution, these figures give: political economy .286, physics .255, philosophy .133, education .132, psychology .110, and zoölogy .084.

One of the most adequate bases of statistical comparison seems to be the financial; but it is at once the most difficult of treatment. Although treasurers' accounts are not as unintelligible and as unsystematic as they are sometimes said to be,¹⁰ enough deviation from a standard method exists to make occasional trouble. Luckily most of these deviations did not materially affect this investigation. Most of the confusion arose because of the way in which expenditures for several

⁹ *The World Almanac*, 1912, is authority for this order. No more reliable source of information was at hand which gave statistics for all the institutions considered. The order is based on registration figures for 1910-11, including summer session.

¹⁰ C. F. Birdseye, *The Reorganisation of our Colleges*, 1909, 340.

TABLE III. REGISTRATION

	I Psy- chology	II Educa- tion	III Zoöl- ogy	IV Pol. Econ.	V Phys- ics	VI Philoso- phy
Columbia†...	210	1725	102	ES 445	830	466
Minnesota...	736	626	1047	1286	399	259
Cornell†...	318	243	118	EL 2214	4200	543
Wisconsin†...	347	365	68	1200	553	168
Illinois†...	412	280	382	418	1050	304
Nebraska†...	*312	320	173	303	248	1
Harvard†...	303	299	244	2332	330	828
California†...	VI	836	521	485	1205	*1461
Kansas†...	376	160	257	533	126	378
Washington†.	VI	216	178	439	280	*248
Smith†.....	VI	VI	195	337	160	*597
Cincinnati†...	164	471	111	354	238	210
Dartmouth†..	54	14	121	918	763	76
Wellesley†...	303	134	189	441	123	259
Tufts.....	43	9	1	55	78	84
Vassar†.....	382	32	36	567	219	542
Mt. Holyoke †	190	190	334	122	162	85
Vermont†....	21	40	30	20	42	20
Amherst†....	164	18	330	260	122	270
Bryn Mawr...	*135	16	BE _m 79	122	61	1
Bowdoin†....	95	—	124	350	59	129
Wesleyan†...	97	—	49	257	81	182

BE_m Biology and embryology combined with zoölogy.

EL Economics and sociology combined with political economy.

ES Economics and political science combined with political economy.

* Indicates that number so marked is shared by some other department.

Roman numerals indicate the department with which the registration is shared.

† Marks institutions represented in the last three tables.

departments or disciplines were lumped into a single budget. Difficulty also arose from the fact that in some cases there were special reasons for an abnormal—either subnormal or supernormal—expenditure, such as reduced salaries paid to substitutes during a regular officer's leave of absence, increased appropriation because of a method of annual rotation of appropriation among the departments, decreased appropriation because of a previous year's unusually large expenditure, or because of a special reorganisation of a department. The amounts given under 'other appropriations' are not uniformly classifiable under any definite heading. As a rule, however, administrative and building expenses are excluded. We have, then, presented in Table IV a list of expenditures

TABLE IV. APPROPRIATIONS

	I. PSYCHOLOGY			II. EDUCATION			III. ZOOLOGY			IV. POLITICAL ECONOMY		
	A.	B.	C.	A.	B.	C.	A.	B.	C.	A.	B.	C.
Columbia†.....	\$12350 10104	\$1199.43 1553	\$15549.43 11717	\$156750 29866	— \$650	\$156750 30516	\$32450 15345	\$4768.36 3594	\$37218.36 19139	\$19400 21020	\$900 850	\$20300 22470
Chicago.....	7750	1340.49	9090.49	6000	865.44	6865.44	—	19025	—	21020	666.02	22738
Cornell†.....	VI	VI	VI	12100	500	12600	7800	500	8300	31520	350	42316
Wisconsin†.....	4050	600	4650	9800	100	11000	11000	1585	13185	19300	245	26350
Michigan.....	6400	1050	8050	7200	1750	8950	16850	2100	18950	22200	2800	19300
Illinois†.....	3550	200	3750	1700	—	1700	6800	750	7550	6200	100	22620
Northwestern.....	3715	210	3925	8900	150	9050	6150	1765	7415	SEL14025	125	6100
Nebraska†.....	VI	VI	VI	10250	100	10350	23150	450	23600	31750	1550	14750
Harvard†.....	VI	VI	VI	15500	600	16100	25350	2350	27700	20440	1440	21880
California†.....	4300	4.28	4304.28	7550	100	7650	8700	1250	9950	3850	350	3850
Ohio State.....	4100	1075	5175	18000	2800	20800	7100	4578	11678	6800	—	7150
Missouri.....	II	II	II	12250	*650	*12900	6800	1800	8600	5500	200	7220
Texas.....	VI	VI	VI	9470	1165	10635	8525	1175	9700	HE 11250	750	5700
Kansas.....	*6200	*639.89	*6839.89	7900	851.21	8751.21	4200	1333.54	5533.54	EL 5700	553.45	6253.45
Indiana.....	3150	350	3500	8675	300	8975	5700	1000	6700	9450	750	10200
Washington†.....	VI	VI	VI	10120	400	10520	12600	550	13150	9650	250	9900
Iowa.....	*2000	200	*2200	2000	—	2000	2000	2000	4000	HE 1800	—	1800
Tennessee.....	3000	150	3150	1500	25	1525	6400	2050	8450	4400	325	4725
Smith†.....	3275	7.20	3282.20	—	500	—	B 7391	2014.58	10305.58	S 3125	200	8922
Cincinnati†.....	2050	200	2250	4450	—	4950	B 5500	800	5800	EL 3200	—	3400
Colorado.....	II	216	II 216	*2000	—	*2000	B 9787	2190	11917	7050	—	7650
Dartmouth†.....	*7250	*89	*7450	2450	—	2450	8000	500	9400	3850	—	3850
Wellesley†.....	3950	4039	*4650	VI	VI	VI	B 7150	928	8078	5400	—	5400
Vassar†.....	*4650	*117.09	*4767.69	1800	—	1800	5700	726.52	6426.52	3925	50	3975
Mt. Holyoke†.....	VI	VI	VI	1800	—	*2500	1450	199.55	1649.55	3800	—	2800
Vermont.....	VI	VI	VI	*5500	—	5500	6300	1482.26	7782.26	5000	68.31	5068.31
Amherst†.....	VI	VI	VI	500	—	500	2400	400	2800	1850	100	2500
Bowdoin†.....	2500	150	2650	1000	150	1150	3000	399.83	4299.83	2500	—	2500
Wesleyan†.....	II	II	II	*5500	*507.16	*3067.16	B 3000	080	3280	2200	400	6550
Montana.....	II	II	II	*3450	*400	*3850	2000					1000

A. Indicates appropriations for salaries of academic officers.

B. Indicates appropriations for other purposes,—books, apparatus, etc.

C. Indicates total appropriations.

* Indicates that amount so marked is shared by some other department.

Roman numerals indicate the department with which the appropriation is shared, *e.g.*, I, psychology; II, education, etc.

† Marks institutions represented in the last three tables.

A Astronomy combined with physics.

B Biology.

E Economics.

EL Embryology.

H History.

L Sociology.

S Political Science.

TABLE IV. APPROPRIATIONS

II. EDUCATION			III. ZOOLOGY			IV. POLITICAL ECONOMY			V. PHYSICS			VI. PHILOSOPHY		
A.	B.	C.	A.	B.	C.	A.	B.	C.	A.	B.	C.	A.	B.	C.
156750	—	\$156750	\$32450	\$4768.36	\$37218.36	E \$19400	\$600	\$20300	\$18200	\$7037.14	\$25237.14	\$31200	\$34.79	\$31234.79
23866	\$650	30516	15545	6865.44	19139	21025	850	22470	22738	5587	28355	12739	485	13224
6000	865.44	6865.44	—	—	—	EL 19025	666.02	19691.02	42316	5400.77	47716.77	14050	347.53	14397.53
11100	500	12600	7800	500	8300	31520	350	31870	26350	1000	27350	*12650	*500	*13150
100	100	9900	11600	1585	13185	19300	245	19545	19300	2925	22225	10000	—	10000
9800	1750	8950	16850	2100	18950	22300	2800	25000	22620	7595	30215	6000	150	6150
7200	—	1700	6800	750	7550	6200	100	6300	6100	3000	9100	3500	—	3500
1700	150	9050	6150	1-65	7415	SEL14025	125	14750	12765	2520	15285	4200	50	4250
8900	100	10350	23150	450	23600	31750	1550	33300	26900	1000	27900	*35750	—	*35750
10250	600	16100	25350	2350	27700	E 20440	1440	21880	25330	8446	25330	*15950	*1160	*17110
15500	100	7650	8700	1250	9950	3850	—	3850	15200	2920	18120	4300	53	4353
7550	100	20800	7100	4578	11678	6800	350	7150	7220	3800	11110	4200	150	4350
18000	2800	*12900	6800	1800	8600	5500	200	5700	5650	2300	7950	3800	400	4200
*12250	*650	*10635	8525	1175	9700	HE 11250	750	12000	6550	2300	8850	*8480	*775	*9255
9470	1165	8751.21	4200	8975	5533.54	EL 5700	553.45	6253.45	5350	1614.16	6064.16	I	I	I
7900	851.21	—	5700	1000	6700	9450	750	10200	6375	2350	8725	2550	350	2900
8675	300	10520	12000	550	13150	9050	250	9900	8400	1000	9400	*8750	*300	*9050
10120	400	2000	2000	2000	4000	HE 1800	—	1800	1800	200	2000	I	I	I
2000	—	1525	6400	2050	8450	4400	325	4725	5300	500	5800	5900	200	6100
1500	25	—	B 7391	2914.58	10305.58	S 3125	—	3125	8922	1841.63	10763.63	2700	—	2700
4450	500	4950	B 5000	800	5800	EL 3200	200	3400	3700	1000	4700	2800	150	2950
*2000	—	2450	B 9787	2190	11977	7650	—	7650	7950	1375	9375	2500	—	2500
2450	VI	VI	B 7150	500	8078	3850	—	3850	7950	*750	*8585	I	I	I
1800	—	1800	5700	928	6426.52	5400	—	5400	7950	635	8585	*3900	—	*3900
*2500	—	*2500	1450	726.52	1649.55	3925	50	3975	4850	863.36	5743.36	I	I	I
500	—	500	6300	1482.26	7782.26	3800	—	3800	2800	369.55	3109.55	*2000	—	*2000
*500	150	1150	2400	400	2800	5000	68.31	5068.31	6200	553.86	6753.86	*4000	*216.79	*4816.79
*500	*507.16	*3067.16	B 3900	399.83	4299.83	1850	100	2500	2500	400	2900	1500	50	1550
*3450	*400	*3850	2000	080	3280	2200	400	2600	1000	911.48	7401.48	3000	—	3000
										470	2070	II	II	II

Officers.
s, apparatus, etc.

the other department.
the appropriation is shared, *e.g.*, I, psychology; II, education, etc.

A Astronomy combined with physics.
B Biology.
E Economics.
Em Embryology.
H History.
L Sociology.
S Political Science.

for the six disciplines in a number of institutions for the academic year 1910-11.¹¹ Whenever an expenditure covers more than the discipline in whose column it is found, that fact is recorded either by a symbolic letter prefixed to the amount, which letter is interpreted in the legend, or by an asterisk, in which case the department which shares the amount is indicated by a Roman numeral referring back to the column where the amount is found. In the comparison of appropriations given below,¹² an arbitrary division similar to that made in Table III has been resorted to in cases where a number of departments share a given amount. It is assumed, for purposes of correlation, that the amount is equally shared. All of the deviations described are so comparatively few in number, and generally affect the 19 institutions compared to so small an extent, that they may be virtually neglected. The average appropriations for the six disciplines in the 19 institutions considered are, then, as follows: physics \$15545, education \$13350, political economy \$12160, zoology \$11090, philosophy \$6545, and psychology \$5285. Converted into *per cent.* of money distribution, these amounts give the following results: physics .240, education .210, political economy .191, zoology .175, philosophy .102, and psychology .082. Combining Tables III and IV, we get the following *per capita* expenditure: zoology \$59.32, education \$45.73, physics \$27.58, philosophy \$21.97, psychology \$21.67, and political economy \$19.12.

An attempt was made to summarise the results of these three tables by means of a correlated average rank for each of the six disciplines. The application of Spearman's 'foot-rule' indicated, however, that the correlation was neither constant nor adequately representative. The best we can do, then, is briefly to outline the facts brought out in the tables. On the whole, psychology foots the lists more often than any other discipline. In this respect it is the most consistent of them all. Political economy, of equal age with psychology, heads the list with the greatest number of university hours, while psychology foots the list with the lowest; in the matter of appropriations, education, the youngest of all the disciplines

¹¹ The single exception is the University of Cincinnati whose fiscal year ends Dec. 31. The year given in this case ends Dec. 31, 1911.

¹² Grateful acknowledgment must be made of the courtesy shown by correspondents in furnishing the desired information. All of the material used in this article was obtained by the author through replies made to questionnaires. Realising the usual annoyance arising from this form of request, the author wishes to give full recognition to the kindness shown by these correspondents.

represented, and political economy, occupy second and third places respectively, while psychology occupies the last; in the number of 'instructor hours,' political economy is second in rank, psychology is lowest; in the number of officers of instruction, political economy is third on the list, psychology is last; in the matter of student registration, political economy heads the list, psychology occupies the next to the last place; education leads with the largest *per capita* expenditure, psychology is next to the end.

After this statistical presentation, a few remarks concerning the condition of psychology as an academic discipline may not be out of place. We find that psychology, after over 25 years of growth, does not stand very high on the honor roll among other academic subjects. Other disciplines, of equal age or younger, have, in several instances, decidedly surpassed it in rank. Various explanations may suggest themselves, but the following seem to the writer to be the most adequate:

(1) Ranking in terms of financial support given, number of student registrations, and the like, may not sufficiently interpret academic prestige, or account for the work that a discipline has accomplished among other disciplines. Certainly education has emphatically, physiology and the social sciences have to some extent, benefited by the application of results obtained in the psychological laboratory. How much, on the other hand, psychology is indebted to physics for its contributions to psychophysical problems, to physiology and anatomy for their functional and structural points of view and facts, to anthropology and the social sciences for their contributions to genetic and group psychology, and to zoölogy for suggestions in comparative work, is, likewise, a difficult matter to compute.

(2) Pure sciences, without definite aim at application, are usually slow of academic growth at the beginning of their establishment. The smaller the possibility of application, the slower is the growth: witness such sciences as astronomy, botany, zoölogy, and geology,—astronomy probably footing the list, if a general impression be allowed, with a correspondingly small possibility of application.

(3) The hardships of progress are most decidedly emphasised when the discipline in question is attempting to gain credit at once in the world at large and in the university, *i. e.*, when it lacks a long historical development antedating

academic recognition. If its progress is well established before the university appears on the scene, attainment of academic approval is easy and rapid. Experimental psychology originated in 1879, and during the next few years it was already a candidate for admission to the American academic curriculum. Its academic growth is, therefore, almost coëval with its progress in the world at large.

(4) The establishment of laboratories in connection with an empirical psychology is necessarily slow and laborious because of the initial expense involved, and for the reason that space has to be procured and a staff of assistants must be chosen. This may explain, in a measure, the fact that the *per capita* expenditure for psychology, a laboratory science, is about equal to that of philosophy, not a laboratory science. Adequate laboratories have not been everywhere provided.

(5) The introspective method, peculiar to the psychologist, may offer a hindrance to the ready acceptance of the discipline because of the false assumption that it requires either an abnormal gift of some sort or years of toilsome training. The very fact that the method is itself variously interpreted, and sometimes poorly understood even by psychologists, suggests that there is difficulty.

Some of these explanations may be found to apply to other disciplines as well; but, perhaps, psychology suffers to the greatest degree because in her case all of the factors mentioned operate together.